INDEX

CIVIL ENGINEERING

January–December 1960

Volume 30

AVAILABLE NOW

Cumulative Index to ASCE Publications

CIVIL ENGINEERING 1930-1959
PROCEEDINGS . . . 1950-1959
TRANSACTIONS . . 1935-1959

This index is a valuable addition to any engineer's library. List price $20.00, with a 50% discount to members and to libraries. Hard bound in blue cloth; 816 pages. Send orders to:

AMERICAN SOCIETY OF CIVIL ENGINEERS
33 West 39th St., New York 18, N.Y.

Published by the AMERICAN SOCIETY OF CIVIL ENGINEERS—*33 West 39th Street, New York, N. Y.*

Index to Civil Engineering

JANUARY—DECEMBER 1960, VOL. 30

In this index, stars indicate articles as opposed to items and discussions.

The Society is not responsible for any statements made or opinions expressed in its publications.

Reprints from this publication may be made on condition that full credit be given to the author and copyright credit to CIVIL ENGINEERING, and that date of original publication be stated.

Subject Index

AIR POLLUTION

Conference on Pollution Abatement of ASCE Sanitary Eng. Div. in Cincinnati ..... Feb. 50
New Albany, Ind.—big chimneys create big problems, R. N. Bergstrom ..... Dec. 65*
Sacramento, Calif.—reducing sewage plant odors in a residential area, W. S. Hyde ..... Oct. 77*

AIRPORTS

Los Angeles, Calif.—plastic sheathes airport theme structure ..... Dec. 90
New York Authority plans major new airport ..... Jan. 93
New York International Airport—American Airlines Terminal ..... Apr. 109
New York International Airport—design for multi-airline terminal ..... Oct. 115
Newark opens ultramodern control tower ..... Mar. 102
Pakistan and Iran—international civil airports under construction by Corps of Engineers, Lewis W. McBride, William O. Tatum, III ..... Sep. 45*
Vancouver International Airport to have jet base ..... Feb. 102
Vandenberg Air Force Base; construction for missile launching, Norman N. Stout ..Feb. 54*
See also Pavements

ALUMINUM

Aluminum output rises in 1959 ..... Mar. 103
Plate stretcher, world's largest, installed by Kaiser Aluminum Chemical Corp. ... Sep. 94
See also Reservoirs, Roofs

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

See Steel

AMERICAN SOCIETY FOR ENGINEERING EDUCATION

See Education

AMERICAN SOCIETY OF CIVIL ENGINEERS

ACHIEVEMENT AWARDS

Allegheny County Sewage Disposal System gets honorable mention in Achievement Awards ..... Jun. 45
St. Lawrence Project gets Achievement Award ..... Apr. 76; Jun. 44
Twelve projects nominated for Outstanding Achievement Award of 1959..... Feb. 44

AIMS AND ACTIVITIES

Progress in ASCE, Annual Address of Frank A. Marston, President of ASCE ..... Jul. 33*
Time for action, inaugural address of President Glenn W. Holcomb ..... Nov. 33*

AWARDS AND PRIZES

Announced by Board ..... Jul. 41
Awarded at Reno Convention ..... Oct. 88
Daniel V. Terrell Award presented at District 9 meeting ..... Jul. 78
Daniel W. Mead prize contest open for 1961. ..... Jul. 43
Daniel W. Mead Prizes to Morgan I. Doyne and L. G. McLaren ..... Jan. 43
John Fritz Medal goes to Stephen D. Bechtel, F. ASCE ..... Sep. 54; Dec. 79
Karl Terzaghi Award proposed by Soil Mech. and Foundations Div. ..... Jan. 67
Karl Terzaghi Award established by ASCE ..... Sep. 84
Professional Achievement Award, E. L. Chandler first winner ..... Apr. 88
Theodore Von Karman Medal established by Eng. Mech. Div. ..... Apr. 85
See also ASCE (Achievement Awards), ASCE (Research)

BALLOTS

Tellers canvass for 1961 Officers..Aug. 108; Oct. 91

BOARD OF DIRECTION

Clarifies status of surveying and mapping ..... Aug. 112
Executive Committee acts on matters referred to it by Board ..... Sep. 53
Exec. Committee meets in Nashville .... Jan. 66
Minutes of Boston meeting ..... Nov. 55
Minutes of New Orleans meeting ..... Apr. 57
Minutes of Reno Meeting ..... Aug. 62

COMMITTEES

Joint Task Committee on Prestressed Concrete meets for first time ..... Nov. 78
Personnel for 1960 ..... Jan. 69

CONDITIONS OF PRACTICE

Committee on Conditions of Practice meets in Cleveland ..... Sep. 54
Policy Statement by Secretary Wisely on "Consultants and government work" ..... Jan. 68; Feb. 37; May 82

CONSULTING ENGINEERING

See ASCE (Conditions of Practice)

CONVENTIONS

Boston, Oct. 10-14, 1960
Activities described . Jul. 40; Sep. 52; Nov. 48
Program ..... Aug. 83
New Orleans, March 7-11, 1960
Activities described Jan. 40; Feb. 86; Apr. 50
Program ..... Feb. 75
Phoenix, Apr. 10-15, 1961
Activities described ..... Dec. 76
Reno, June 20-24, 1960
Activities described ..... Mar. 38; Aug. 56
Correction ..... Sep. 84
Program ..... May 65

EDUCATION

ASCE co-sponsors Cooper Union curricula study conference ..... Feb. 61
Committee on Eng. Education, Los Angeles Sect., final report condensed (1959, Oct., p. 734)
Discussion by Richard Z. Zimmermann, Jr. ..... Jan. 78
Faculty development conference sponsored by ASEE and ASCE ..... Feb. 84

EMPLOYMENT CONDITIONS

What ASCE has done to improve employment conditions, R. K. Lockwood .... Feb. 33*

ETHICS, CODE OF

An interpretation of the ASCE Code of Ethics, final report of Task Committee on Principles of Practice ..... Jan. 57
Three members admonished for unprofessional conduct ..... Sep. 84

FELLOWSHIPS

See ASCE (Research)

FOREIGN ENGINEERING

Soviet engineers welcomed at ASCE reception ..... Mar. 78

HISTORY

CIVIL ENGINEERING—thirty years of ASCE in, Mary E. Jessup ..... Oct. 56*

INSURANCE

Life Insurance Plan reduces requirements ..... Sep. 75
New group plan for members ..... Feb. 60

LIFE MEMBERS

Pittsburgh Section has son and father Life Members ..... Jan. 82

LOCAL SECTIONS

Illinois Section's TV series great success ..... Jan. 67
Kansas City Section host to Mid-Century Construction Conference ..... Jan. 82
Los Angeles Section; from Final Report of Committee on Engineering Education (1959, Oct., p. 734)
Discussion by R. Z. Zimmermann, Jr. ..... Jan. 78
Metropolitan Section sponsors N.Y. World's Fair program ..... Dec. 77
Mid-South's Little Rock Branch elects woman president ..... Mar. 83
Midwest Sections to hold Power Conference in Kansas City ..... Oct. 98
Pacific Northwest Conference in Tacoma, Wash. ..... Mar. 79; Apr. 85
South Dakota and Texas Sections add branches ..... Jan. 66
Take part in Engineers' Week ..... Apr. 86

MEMBERSHIP GRADES

Transfer to higher grade still a simple procedure ..... Feb. 60

OVERSEAS UNITS

Australia—ASCE Overseas Unit formed there ..... Dec. 77

POLLUTION ABATEMENT

Sanitary Engineering Div; Conference in Cincinnati ..... Feb. 50, 84

PUBLICATIONS

CIVIL ENGINEERING—discussions deploring "slickerization" by Robert F. Legget, Jun. 73
by Steven J. Fenves ..... Aug. 93
CIVIL ENGINEERING—thirty years of ASCE in, Mary E. Jessup ..... Oct. 56*
CIVIL ENGINEERING, thirty years of engineered progress, Hal W. Hunt ..... Oct. 53*
Directory for 1960 available ..... July 40
Manual No. 37, "Design and Construction of Storm and Sanitary Sewers," issued ..... Feb. 60; Jun. 80
Corrections to ..... Jul. 79
Discussion by M. G. Spangler ..... Oct. 108
Reply by Manual Editing Committee ..... Dec. 75
Manual on effects of nuclear blasts (proposed) —requests for reviews of ..... Sept. 84; Oct. 96; Nov. 79

RESEARCH

Research prizes for 1959 awarded ..... Apr. 84
Research prize winners for 1960 announced ..... Nov. 81
Research Fellowship—first ASCE fellow completes year of study ..... Nov. 78
Research Fellowship for next year available ..... Nov. 79

SURVEYING AND MAPPING PRACTICE

Board of Direction clarifies status of surveying and mapping ..... Aug. 112

STAFF

E. L. Chandler retires as Assistant Secretary ..... May 77
John H. Fisk, Assistant to the Secretary ..... May 81; Sep. 55
Margaret Maurer receives watch after 25 years of service ..... June 75
Don P. Reynolds made Assistant Secretary and others have new assignments ..... Sep. 55
Irvin J. Schwartz joins Technical Publications staff ..... Jan. 81
John A. Zecca resigns as comptroller of ASCE ..... Nov. 78

STUDENT CHAPTERS

Pacific Southwest Conference at Reno .. Apr. 88
Receive Annual Awards ..... Jun. 77

Copyright, 1961, by the American Society of Civil Engineers. Printed in U.S.A.

TECHNICAL DIVISIONS

Eng. Mech. Div. sponsors conference at Purdue Univ. ..... Apr. 85
Hydraulics Division Conference, Seattle, Wash., Aug. 17-19, 1960 ..... June. 76; Oct. Program ..... Jul. 93 73
Sanitary Eng. Div. Conf. in Cincinnati . Feb. 50
Soil Mechanics and Foundations sponsors Research Conference on Shear Strength of Cohesive Soils (Boulder, Colo.)—program May 73
Structural Division's library of computer programs ..... Jul. 76

YOUNGER MEMBERS

Does the civil engineer need ASCE? Aubrey D. May ..... Feb. 67*
The Younger Viewpoint, department, in each issue

AQUEDUCTS

Colorado River aqueduct to be completed in May ..... Apr. 108
New York, N. Y.—concreting the West Delaware Water Supply Tunnel, Gail Knight Dec. 42*
San Diego Aqueduct paved by a crawler-mounted slip-form, Robert B. Diemer Mar. 64*

ARCTIC ENGINEERING

Adverse weather—arctic and subarctic areas (wet cold), Palmer W. Roberts ..... Jul. 44*
Army uses steam to drill wells in Arctic . Jul. 92
Greenland—a city takes shape under ice cap Aug. 119
NSF grants for antarctic research ..... Oct. 113

ASPHALT

Asphalt as a steel-pipe coating, D. J. McNutt Nov. 68*

ATOMIC ENERGY

Aggregates and aggravations of heavy-weight concrete, L. D. Long, J. R. Clements (1959, Dec., p. 876)*
Discussion by John C. King ..... Mar. 75
Reply by Mr. Long ..... Mar. 75
Better steel sought for reactors ..... Jan. 92
Cornell study on the design of an industrial city for survival ..... May 104
Engineers, atomic physics and mathematics, E. R. Harrington ..... Feb. 42*
Discussion by L. K. Himelright .... Apr. 82
Hot Laboratoiy Conference of American Nuclear Society ..... Mar. 79
Indian Point, N. Y.—heat exchanger for Con Edison ..... Feb. 101
National Nuclear Congress to be held in New York in 1962 ..... Jun. 80
Navy's new atomic submarine launched . Feb. 100
1960 Nuclear Congress papers available . Jun. 75
Nuclear Congress, Apr. 4-7, 1960, at New York Coliseum ..... Jan. 41; Mar. 39; May 76

ATOMIC ENERGY, Power Plants

Construction problems of nuclear power plants, Donald G. Iselin ..... Oct. 64*
Parr, S. C.—ground broken for first atomic power project in Southeast ..... Nov. 94

AUDITORIUMS

See Buildings (Auditoriums and Stadiums), Roofs, Welding

AWARDS AND PRIZES

Washington Award to electrical engineer, H. P. Sedwick ..... Apr. 86
See also Fellowships

AZIMUTH

See Surveying and Mapping

BEAMS

Bethlehem Steel Co. offers new structural sections ..... Dec. 90
Discussion on use of shear connectors in composite sections, George T. Williams .. Oct. 108
M-m tables for deflection calculations, H. H. Fickel ..... Jun. 70*
Discussion by Abraham Woolf ..... Aug. 93
Discussion by R. C. Lofgren ..... Aug. 93
Discussion by T. F. Hickerson ..... Nov. 76
New composite-beam concepts, Frank D. Steiner ..... Feb. 72*
A rubber stamp for beam design, Allen Jones Mar. 72*
Spacing of shear connectors for composite sections, Les N. Francis ..... Dec. 70*
Spacing of vertical stirrups in beams, Anselm Cefola ..... Oct. 81*

BID PRACTICE

Why negotiate for photogrammetric services? A. O. Quinn ..... Nov. 64*

BOLTS

High-strength bolts used on railroad bridge project in Quincy, Ill. ..... Nov. 94
Howard E. Hanson Dam; bolts stabilize high rock slopes, H. E. Christman ... Feb. 62*
Quebec Hydro-Electric Commission finds interrupted-rib bolts advantageous for towers, S. C. Dickerhoff, Jr. ..... Feb. 52*

BRIDGES

AISC booklet features highway bridge tables Feb. 99
Awards for most beautiful steel bridges opened in 1959 by AISC ..... Nov. 91
California Division of Highways uses high-strength steels for bridges, Leonard C. Hollister and R. D. Sunbury ..... Jun. 60*
Calumet City, Ill.—bridge dismantled without falsework ..... Aug. 48*
Cascade Mountains, Washington—heavy-duty composite bridge, Homer M. Hadley May 44*
A chart for intermediate moments, Keith A. Kelly ..... Mar. 74*
Chesapeake Bay—long concrete trestle and tunnel for bay crossing ..... Dec. 89
Chesapeake Bay Project financed ..... Oct. 112
Discussion of bridge clearances for missile transport by R. Alan Berggren ..... Jul. 69
English Channel bridge proposed ..... May 103
Florida—precast, prestressed sections for bridges, W. E. Dean ..... Jul. 54*
Golden Gate Bridge capacity to be studied Apr. 111
Highway bridge practice, Glenn S. Paxson Jan. 47*
Indiana and Kentucky to be connected by bridge ..... Apr. 111
Laboratory tests of continuity in precast-prestressed bridges, Alan H. Mattock, Paul H. Kaar ..... Sep. 38*
New York, N. Y.—George Washington Bridge—concreting of lower deck started .... Nov. 92
New York, N. Y.—George Washington Bridge—erection of lower deck, E. L. Durkee Jul. 35*
New York, N. Y.—George Washington Bridge has second deck placed ..... Mar. 102
New York, N. Y.—Narrows Bridge, contract for Staten Island tower awarded ..... May 104
New York, N. Y.—Narrows Bridge financing Feb. 100
New York, N. Y.—Narrows Bridge piers, bids opened ..... Jan. 90
New York, N. Y.—Narrows Bridge—well-points dewater pier sites, John F. Hoffman Oct. 71*
New York, N. Y.—Throgs Neck Bridge on schedule ..... Aug. 119
New York, N. Y.—Throgs Neck Bridge ready for cable spinning ..... Mar. 100
Oklahoma-Texas route across Lake Texoma; exceptional job engineering pays off in bridge construction, Ira E. Williams .. Jan. 60*
Oneida Lake, N. Y.—longest prestressed-concrete girder bridge (320 ft) in U. S., Eric C. Molke ..... May 60*
Peace River Bridge on Alaskan Highway opens ..... Mar. 101
Pensacola Bay, Fla.—bridge towed 200 miles for erection, D. W. Milhan ..... Aug. 76*
Philadelphia—lift span across Delaware replaced ..... Mar. 103
Philadelphia's Vine Street Bridge gets AISC Award ..... Feb. 43
Richmond-Petersburg, Va.—turnpike bridge on hammerhead piers, D. B. Steinman, C. H. Gronquist (1959, Nov., p. 774)*
Correction by Mr. Gronquist ..... Jan. 79
Venezuela—bridge over Lake Maracaibo Sept. 92
Venezuela job utilizes new bridge-building machine ..... Jan. 94

BUILDING CODES

National Assoc. of Home Builders sponsors Building Code Conference in Washington, D. C. ..... Jun. 117

BUILDINGS

Brockton, Mass.—steel joists lower unit costs for a supermarket, James R. Cass .... Apr. 58*
Building Research Institute's fall conference planned ..... Oct. 115
Building Research Institute of National Academy of Sciences meets in New York .. May 106
Dallas to have construction industry center Mar. 104
Leakage in masonry and curtain-wall construction, Raymond W. Ehrenberg (1959, Dec., p. 865)*
Discussion by Clayford T. Grimm . Mar. 76
St. Louis Engineers' Club has new headquarters ..... Jan. 66
See also Fire Damage, Lift-Slab Construction, Roofs, Welding, and below.

BUILDINGS, Apartment Houses

Philadelphia, Pa.—Penn Center House, cooperative apartment in renewal project, Harold H. Gebert ..... Oct. 58*
Boston apt.—wet rotary preexcavation for piles, Lindsey J. Phares ..... Feb. 64*

BUILDINGS, Auditoriums and Stadiums

Columbus, Ohio—racetrack has hyperbolic paraboloid roof for grandstand, R. M. Gensert ..... May 49*
New York's Lincoln Center Music Hall design completed ..... Jan. 90
Pennsylvania State University's all-steel-deck stadium moved to new site, James H. McCartney ..... Oct. 74*
Portland, Oreg., Memorial Coliseum has cantilevered steel-frame roof, John T. Merrifield ..... Mar. 44*
San Antonio, Tex.—Villita Assembly Building has cable-suspended roof, W. E. Simpson ..... Nov. 63*
Utica, N. Y., auditorium features lightweight roof and telescoping seats .... Jun. 113

BUILDINGS, Domes

Washington, D. C., Capitol dome repaired. Feb. 99

BUILDINGS, Factories

Fort Wayne, Ind., tire plant for B. F. Goodrich Co. ..... Apr. 110

BUILDINGS, Garages

Newark, N. J.—garage ramps raised hydraulically ..... Sept. 93
St. Louis, Mo.—stiff-leg derrick solves mud problem on parking structure, Morgan I. Doyne ..... Sep. 56*
News item on setting of steel ..... Dec. 95

BUILDINGS, Office Buildings

Des Moine, Iowa—girder holds up a bank, L. A. Perdue ..... Dec. 46*
Jacksonville, Fla., gets home office building for Atlantic Coast Line RR, D. B. Packard Mar. 56*
Long Beach office for So. Calif. Edison Co. May 104
Los Angeles to have new federal office building ..... Feb. 102
New York, N. Y.—United Engineering Center: I. All-welded structure, Samuel C. Bast, II. Steel frame, Philip Kleiner .. Jul. 62*
New York—Western Electric Co.'s all-welded office building topped out ..... Jul. 93
New York World Trade Center planned Apr. 111
Seattle, Wash., office building utilizes open-web beams, H. I. Johnson, C. T. Dooley Mar. 52*

BUILDINGS, Schools

University of Missouri has new civil engineering building ..... Mar. 103

BUILDINGS, Skyscrapers

Los Angeles, Calif.—skyscraper of seismic design ..... Jul. 89
New York—newcomer to Rockefeller Center skyline ..... Dec. 89

BUILDINGS, Warehouses

New Jersey—a warehouse and a switching station built with prestressed concrete, Philip M. Grennan ..... May 36*

BUSES

New York—contract let for bus station at George Washington Bridge ..... Aug. 121
New York's George Washington Bridge Bus Station has unique roof ..... May 105

CABLES

San Antonio, Tex.—Villita Assembly Building has cable-suspended roof, W. E. Simpson ..... Nov. 63*

CANALS

Canada—"Atlantic Seaway" plans disputed Jul. 92
Netherlands—canal project to improve lower Rhine ..... Aug. 120
See also Panama Canal

CAUSEWAYS

Florida—Miami Beach causeway in service Feb. 101

CEMENT

Argentina gets huge wet-process rotary cement kiln ..... Sep. 96
Cement mortar as a steel-pipe coating, C. E. Lamar ..... Nov. 70*
Weather forecasting service set up for cement users ..... Sep. 96

CENSUS

Clarify your position for census bureau. Mar. 103

CHIMNEYS

New Albany, Ind.—big chimneys create big problems, R. N. Bergstrom ..... Dec. 65*

CITY PLANNING

Alaska—growth plan developed for Anchorage ..... Dec. 91
California, Los Angeles—Century City, an urban renewal project, to start soon .. Oct. 114
California, Los Angeles—contract for Century City announced ..... Nov. 93
California—Ventura County's master plan authorized ..... Dec. 94
California—urban renewal problems with an exploding population, William H. Claire Oct. 48*

CIVIL ENGINEERING's special "Urban Renewal" issue, 1960, Oct.
Connecticut—Hartford; a constructor gets into urban renewal, Clifford S. Strike . Oct. 50*
Federal Urban Renewal Council formed Oct. 114
Ford Foundation gives grants for urban studies Oct. 115
France—Paris plans its first major urban renewal project Oct. 114
Minnesota—Minneapolis—Gateway Center project planned Oct. 115
More cities undertake urban renewal projects Oct. 114
New York—site for a new city, Breezy Point May 106
Oregon, Portland—Lloyd Center almost completed Jul. 90
Pennsylvania, Philadelphia—Penn Center House, cooperative apartment in renewal project, Harold H. Gebert Oct. 58*
Tennessee—integrated improvements for Chattanooga, Robert E. Barkley Oct. 61*
Virginia—Norfolk builds for the future, J. H. Weidman, Donald R. Locke Oct. 68*
Traffic and transportation in urban renewal, Wilbur S. Smith Oct. 45*
Urban Renewal Administration offers publications Nov. 93
Urban renewal and federal legislation, R. L. Dickman Oct. 43*
Discussion by James M. Abernathy Dec. 73

CIVIL DEFENSE

ASCE to make data from Office of Civil and Defense Mobilization available to members Oct. 96
Data mailed to ASCE Members Nov. 78

COASTAL ENGINEERING

Seventh International Conference on Coastal Engineering held in The Hague, Holland, Aug. 22-27, 1960 Oct. 100

COLUMNS

"Determining the lateral deflection and permissible loads on columns," Donald Bregman (1959, Oct., p. 714)*
Reply to discussers by Mr. Bregman Jan. 79
Extra-large bars for reinforced concrete columns, Vernon E. Swanson Feb. 82*
Discussion by Norman F. Brunkow . Apr. 82
Guide to Design Criteria for Metal Compression Members issued by Column Research Council Oct. 100

COMPUTERS, Electronic

Computer designs steel—a floor at a time, John H. Wells (1959, Jun., p. 414)*
Discussion by M. B. Card Apr. 82
Discussions excerpted from letters to John J. Kozak on CIVIL ENGINEERING's feature, "Electronic computer applications" (1959, Dec., p. 886) Mar. 75
Electronic Computation Conference in Pittsburgh sponsored by ASCE groups Oct. 96
Library of computer programs collected by ASCE Structural Div.
Mar. 80; May 78; Jul. 76; Sept. 76
Second National Conference on Electronic Computation in Pittsburgh—program . Aug. 94

CONCRETE

ACI holds 56th Annual Convention in New York May 103
Aggregates and aggravations of heavy-weight concrete, L. D. Long, J. R. Clements (1959, Dec., p. 876)*
Discussion by John C. King Mar. 75
Reply by Mr. Long Mar. 75
Concrete mixes designed by nomograph, Guy F. Tabor Feb. 73*
Discussion by Norman E. Henning . May 75
Composite construction in precast and cast-in-place concrete, Arthur R. Anderson Mar. 34*
How to get quality concrete, J. J. Manning Jun. 40*
Lawrence, Okla., concrete frame supports 5½-mile conveyor belt for cement plant, J. Roy Fraser Feb. 38*
New York refuse-transfer terminal concrete repaired after a fire Jun. 54*
See also Forms, Grouting, and below.

CONCRETE, Precast and Prestressed

Composite construction in precast and cast-in-place concrete, Arthur R. Anderson Mar. 34*
Computing prestressed concrete composite sections, Hans R. Schaefer Jun. 72*
Discussion by Kenneth Dino Aug. 92
Florida—precast, prestressed sections for bridges, W. E. Dean Jul. 54*
Florida Road Department uses prestressed concrete sheetpiles for bulkheads and retaining walls, W. E. Dean Apr. 68*
Horsham, Pa.—prestressed concrete resists fire damage, Charles C. Zollman, Marcello G. Garavaglia, Aviv Rubin Dec. 36*
Jamaica, B.W.I.—precast concrete housing erected Dec. 95
Laboratory tests of continuity in precast-prestressed bridges, Alan H. Mattock, Paul H. Kaar Sep. 38*
New Jersey—a warehouse and a switching station built with prestressed concrete, Philip M. Grenan May 36*
Oneida Lake, N. Y.—longest prestressed-concrete girder bridge, 320 ft, in U. S., Eric C. Molke May 60*
Pensacola Bay, Fla.—bridge towed 200 miles for erection, D. W. Milhan Aug. 76
Prestressed concrete in marine structures, Ben C. Gerwick, Jr. (1959, Nov., p. 785)*
Discussion by J. W. B. Blackman . Jan. 79
Prestressed Concrete Institute holds Sixth Annual Convention in New York Nov. 92

CONCRETE, Reinforced

Extra-large bars for reinforced concrete columns, Vernon E. Swanson Feb. 82*
Discussion by Norman F. Brunkow . Apr. 82
Spacing of vertical stirrups in beams, Anselm Cefola Oct. 81*
Wire Reinforcement Institute issues Building Design Handbook *Sep.* 93
See also Beams

CONSTRUCTION, Costs

Costs in United States rise Jan. 92
Forecasts 3 to 4 percent rise in building costs Dec. 91

CONSTRUCTION, Equipment

Abiquiu Dam, N. Mex.—new tools for earth-dam construction, Paul H. Dunaway . Sep. 35*
Associated Equipment Distributors annual meeting in Chicago Mar. 101
Associated Equipment Distributors name H. J. Mayer as president May 105
California—smooth surface from slip-form paving, R. M. Innis Nov. 44*
Interstate Highway Route between Chicago and Milwaukee; success with a novel paving plant, Douglas E. Small Jan. 54*
Maryland uses new paver and spreader . Jan 93
New equipment on our highways, H. A. Radzikowski Jan. 50*
St. Louis, Mo.—stiff-leg derrick solves mud problem on parking structure, Morgan I. Doyne Sep. 56*
News item on setting of steel Dec. 95

CONSTRUCTION INDUSTRY

AGC's Annual Conv., San Francisco . May 102
Dallas to have construction industry center Mar. 104
Mid-Century Construction Conference in Kansas City Jan. 82
Moles awards for Harry T. Immerman and Herman Brown Dec. 88
President Eisenhower's budget message . Feb. 87

CONSTRUCTION, Procedures

Adverse weather, its effect on design and construction, Palmer W. Roberts: I. Humid tropic areas (wet hot) Jun. 35*; II. Arctic and subarctic areas (wet cold) Jul. 44*
Discussion on Part I, by D. S. Laidlaw Aug. 93

CONSTRUCTION, Volume

Climbs to new high in 1959 Feb. 98
Monthly volume recorded . . . Mar. 100; Apr. 108; May 105; Jun. 115; Jul. 91; Aug. 118; Sep. 94; Oct. 112; Nov. 90; Dec. 89
Normal year predicted by AGC Nov. 94

CONSULTING PRACTICE

"Policy statement" by ASCE Executive Secretary Wisely on Consultants and Government Work Feb. 37*
Ohio develops specifications for consulting services on highways, E. S. Preston . . . Jan. 44*

CONTRACTS

Suggested form of ASCE-AGC contract May 77

CONVEYORS

Lawrence, Okla.; concrete frame supports 5½-mile conveyor belt for cement plant, J. Roy Fraser Feb. 38*

DAMS

Abiquiu Dam, N. Mex.—new tools for earth-dam construction, Paul H. Dunaway . Sep. 35*
Brazil—a dam for Brasilia, Erik Rettig . May 54*
Columbia, Ala., Lock and Dam—builders chosen Jun. 113
Cumberland Dam on Ohio River reaches third stage of construction Dec. 91
Discussion on uplift on dams, mentioned in Exam Gems by Serge Leliavsky (1959, Oct., p. 754) Feb. 82
Glen Canyon Dam concreting started . . . Jul. 91
Howard E. Hanson Dam; bolts stabilize high rock slopes, H. E. Christman Feb. 62*
Iran—Dez Dam, W. L. Voorduin Aug. 50*
Italy—concreting on Vaiont Dam completed Sep. 95
Los Angeles, Calif.—collapsible dam aids water supply, Norman M. Imbertson . . . Sep. 42*
Madison Canyon, Mont.—Hebgen Dam, Montana, damaged by Madison Canyon slide, Keith R. Barney Aug. 72*
Discussion by Gray Edwards Oct. 108
Malpasset Dam on French Riviera fails . Jan. 91*
McAlpine Lock and Dam near Louisville, Ky., named by Congress Jul. 89
Priest Rapids Dam to have 90-ton spillway gates Jan. 93
Pumping saves water and power in fish-passage facilities, R. H. Deurer Nov. 38*
Sixth Congress on Large Dams, Transactions available Jul. 43
U. S. Committee on Large Dams to meet at ASCE Reno Convention May 81
Wanapum Dam on Columbia River started Jan. 94
Wanapum Hydro Development on Columbia River, C. K. Willey Sept. 65*
See also Fish and Fishways

DOMES

See Buildings (Domes)

DRAFTING

Analytic geometry solves drafting-room problems, Sidney L. Goldberg Dec. 68

DRAINAGE

Florissant, Mo.—shopping center gets storm-water control Feb. 63*

DREDGING

Suffolk County, N. Y.—ownership of dredge boosts program, Albert Cass Aug. 47*

DRILLING AND BORING

Army uses steam to drill wells in Arctic. . Jul. 92

DRYDOCKS

Puget Sound Naval Shipyard—a deep cofferdam for a drydock Apr. 108

EARTHQUAKES

Chile earthquake spreads disaster round world Jul. 88
Discussion by Thorndike Saville, Jr. Sep. 74
Madison Canyon, Mont.—Hebgen Dam damaged by Madison Canyon slide, Keith R. Barney Aug. 72*
Discussion by Gray Edwards Oct. 108
Morocco earthquake damage to be studied May 108
San Francisco, Calif.—bottom of San Francisco Bay evaluated for Trans-Bay Tube, R. J. Swan Nov. 66*
Second World Conference on Earthquakes held in Japan, July 11-18, 1960 Oct. 113
World Congress on Earthquake Engineering in Tokyo Jan. 41

EDUCATION

ASCE co-sponsors Cooper Union curricula study conference Feb. 61
American Society of Engineering Education issues annual survey Apr. 59
Annual Meeting of ASEE studies manpower shortage Sep. 92
The case for professional schools of engineering, R. E. Fadum Aug. 80*
Discussion by M. D. Morris Oct. 108
Engineering and science lead in Russian education Sep. 55
Engineering Curricula Conference at Univ. of Mich. sponsored by ASCE, Cooper Union and ASEE Apr. 88; June. 74; Aug. 106
Engineers, atomic physics, and mathematics, E. R. Harrington Feb. 42*
Discussion by L. K. Himelright Apr. 82
Engineers Joint Council studies decline in freshman enrollment Jun. 76
EUSEC Conference to study engineering education Mar. 74
EUSEC to publish international education report Oct. 98
Faculty development conference sponsored by American Society for Engineering Education and ASCE Feb. 84
Graduate scholarships, fellowships, etc., listed in Chi Epsilon survey Jan. 90
Introductory program instituted to attract junior high school students to civil engineering Sep. 84
Pan American Congress on Eng. Education in Buenos Aires May 82
Summer courses for civil engineers Mar. 100
See also ASCE (Education), Fellowships, National Science Foundation

EMPLOYMENT

Am. Soc. for Eng. Education issues leaflet, *Recruiting Practices and Procedures—1959* Jan. 59
Bulletin of engineers started by ESPS . . Jan. 49
An examination of civil engineers' compensation, Oscar S. Bray Nov. 41*
Publicly employed engineers in professional society activities, John G. Duba Dec. 51*
Survey of employer practices by EJC . . . Jul. 75
Trends in employment conditions in relation to remuneration in public practice, Irving F. Ashworth Mar. 50*
What ASCE has done to improve employment conditions, R. K. Lockwood . . . Feb. 33*

ENGINEERING SOCIETIES LIBRARY

Issues bibliography on Indexing Mar. 79

ENGINEERING SOCIETIES PERSONNEL SERVICE
See Employment

ENGINEERS AND ENGINEERING
New York firm of Parsons, Brinckerhoff, Hall & Macdonald changes name ..... Jan. 92

ENGINEERS COUNCIL FOR PROFESSIONAL DEVELOPMENT
Holds 28th annual meeting in Montreal Dec. 79
Volunteers wanted for guidance work ... Mar. 78

ENGINEERS IN PUBLIC LIFE
Dr. James Killian's address at ASCE Boston Convention luncheon ..... Nov. 65
The engineer and politics, George D. Clyde ..... Aug. 45*

ENGINEERS JOINT COUNCIL
Ads aim at press; hit wide public ..... Mar. 63
Annual meeting hears report of President Enoch R. Needles ..... Mar. 62
Coordinates programs for 1960 Nuclear Congress ..... Jan. 41
Engineering Manpower Commission of EJC reports rise in demand for engineers .. Feb. 87
EJC delegation studies manpower in Soviet Union ..... Aug. 112
EJC sponsors, with ASCE, tour of Swedish engineer Dr. E. A. Bjerhammar ..... Dec. 79
Freshman enrollment decline studied ... Jun. 76
New newsletter, "EJC Engineer," due in February ..... Feb. 85
L. K. Wheelock, new Secretary ..... May 77
Supports nominations to Hall of Fame . Sep. 49
Survey of employer practices by EJC ... Jul. 75
"Visiting foreign scientist" program ... Feb. 61

ETHICS, CODE OF
See ASCE, (Ethics, Code of)

FACTORIES
See Buildings (Factories)

FEES
See Salaries and Fees

FELLOWSHIPS
Bakhmeteff Research Fellowship available Nov. 81
Foreign students enjoy fellowship program of International Road Federation ..... Nov. 95
Harry E. Jordan Scholarship Award established by Water and Sewage Works Manufacturers Association ..... Nov. 95

FICTION, THE ENGINEER IN
The civil engineer in fiction, Samuel C. Florman (1959, Aug., p. 717)*
Reply to a discusser by Mr. Florman. Jan. 79

FILMS AVAILABLE
Port of New York film, "The Fabulous Decade," available ..... Jan. 81

FIRE DAMAGE
Horsham, Pa., prestressed concrete resists fire damage, Charles C. Zollman, Marcello G. Garavaglia, Aviv Rubin ..... Dec. 36*
Waterways Experiment Station plans rebuilding after fire ..... Dec. 90

FISH AND FISHWAYS
Pumping saves water and power in fish-passage facilities, R. H. Deurer ..... Nov. 38*
See also Dams

FLOW TUBES
See Hydraulics

FOOTINGS
Design chart for vertical stress under square footings, Benjamin Koo ..... Sep. 73*
Factors of safety for a footing against overturning or sliding, W. Bertwell (1959, Nov. 797)*
Discussion by Marcel Bitoun ..... Mar. 76
Reply by Mr. Bertwell ..... Mar. 77

FOREIGN ENGINEERING
Argentina province studies public works. Apr. 109
Australian underground power project ahead of schedule, Clarence L. Granger ..... Jun. 56*
Blue Nile—multipurpose investigation, Alfred Golzé (1959, Oct., p. 695)*
Correction by Mr. Golzé ..... Jan. 79
Brazil—a dam for Brasília, Erik Rettig . May 54*
England—London sewage treatment plant utilizes sludge gas ..... Jan. 92
France—Malpasset Dam on French Riviera fails ..... Jan. 91*
Highway progress around the world, Robert O. Swain ..... Jan. 70*
Iran—Dez Dam, W. L. Voorduin ..... Aug. 50*
Israel develops new port and city at Ashod ..... Sep. 92
Italy—concreting on Vaiont Dam completed ..... Sep. 95
Jamaica, B.W.I.—precast concrete housing erected ..... Dec. 95
Japan—thermal electric stations, O. D. Ides, R. T. Richards ..... Feb. 46*
Korea—tidal basin and lock for a port, Daniel A. Richards ..... Aug. 69*
Pakistan and Iran—international civil airports under construction by Corps of Engineers, Lewis W. McBride, William O. Tatum, III ..... Sep. 45*
Pakistan to reclaim salt-spoiled areas .. Dec. 88
Peru—experience with expansive clay, Forrest D. Clark ..... May 42*
Discussion by W. Irvine Low ..... Sep. 74
Discussion by N. Sanyal ..... Nov. 77
Reply by author ..... Nov. 77
South America, good-will tour of ..... Apr. 111
Sweden—telescopic caisson for a lighthouse base, Robert V. Gellerstad ..... Sep. 58*
Venezuela—bridge over Lake Maracaibo . Sep. 92
Venezuela job uses new bridge building machine ..... Jan. 94

FORMS
California—smooth surface from slip-form paving, R. M. Innis ..... Nov. 44*

FOUNDATIONS
California housing developments in hillside environments, G. Austin Schroter and Ray O. Maurseth ..... Jun. 66*
Estimating the relative density of sands, Bonner S. Coffman ..... Oct. 79*
Peru—experience with expansive clay, Forrest D. Clark ..... May 42*
Discussion by W. Irvine Low ..... Sep. 74
Discussion by N. Sanyal ..... Nov. 77
Reply by Mr. Clark ..... Nov. 77
See also Soil Mechanics

GROUTING
New Jersey Highway Department uses colloidal grout to repair concrete piles, Saul Grand ..... Jun. 48*

GARAGES
See Buildings (Garages)

GIRDERS
Des Moines, Iowa—girder holds up a bank, L. A. Perdue ..... Dec. 46*

HANGARS
See Airports

HIGHWAYS
Brazil highway pushed from Belem to Brasília ..... Jul. 90
California builds road to the Winter Olympics ..... Jan. 38*
California—smooth surface from slip-form paving, R. M. Innis ..... Nov. 44*
Charting the highway program through 1960, B. D. Tallamy ..... Jan. 33*
CIVIL ENGINEERING, special issue on highways, Jan. 1960
Discussion of bridge clearances for missile transport by R. Alan Berggren ..... July 69
Ecuador's proposed 350-mile highway program ..... May 106
Eighth Pan American Highway Congress ..... Mar. 103
Geometric design of modern highways, C. H. Lang ..... Jan. 63*
Highway bridge practice, Glenn S. Paxson ..... Jan. 47*
Highway progress around the world, Robert O. Swain ..... Jan. 70*
Interstate Highway Route between Chicago and Milwaukee; success with a novel paving plant, Douglas E. Small ..... Jan. 54*
Los Angeles, Calif.—new type of median barrier for Freeway ..... Nov. 93
Italy to build many new roads ..... Apr. 108
Maine road-surface maintenance, Page Johnson ..... Jan. 73*
Maryland uses new paver and spreader .. Jan. 93
New equipment on our highways, H. A. Radzikowski ..... Jan. 50*
Ohio develops specifications for consultants' services on highways, E. S. Preston ... Jan. 44*
Discussion by George H. Leland .. Mar. 76
Oklahoma-Texas route across Lake Texoma; exceptional job engineering pays off on bridge construction, Ira E. Williams .. Jan. 60*
See also Bridges, Pavements, Road Tests, Tunnels

HIGHWAY SIGNS AND SIGNALS
Self-luminous signs suggested for highways by BPR ..... Sep. 93

HISTORY OF ENGINEERING
CIVIL ENGINEERING, thirty years of engineered progress, Hal W. Hunt ..... Oct. 53*
The civil engineer in fiction, Samuel C. Florman (1959, Aug., p. 544)
Reply to discussers by Mr. Florman . Jan. 79
Discussion on large-size steel used in 1903, Hunter W. Hanly ..... Jun. 73
Discussion on notable civil engineers of the Civil War by Robert S. Mayo ..... Jul. 69
Discussion by H. L. Goodell ..... Oct. 108
The Story of Engineering by J. K. Finch, published in Anchor Book series ... Aug. 119

HOUSING
California housing developments in hillside environments, G. Austin Schroter and Ray O. Maurseth ..... Jun. 66*
Jamaica, B.W.I.—precast concrete housing erected ..... Dec. 95
San Francisco home developers stabilize marginal lands, Michael Praszker ..... Feb. 68*

HYDRAULICS
ASCE Hydraulics Division Conference, Seattle, Wash. Aug. 17-19, 1960 . Jun. 76; Oct. Program ..... Jul. 93 7
Apparatus shows critical velocities in pipe flows, J. W. Fortey ..... Oct. 82*
The Dall flow tube, Edmond B. Lynch Mar. 66*
International course in hydraulic engineering to be held in the Netherlands ..... Feb. 100
Open-air tube in tank solves many problems, Joseph C. Kent ..... Aug. 96*
Discussion by B. W. Sarjeant ..... Dec. 73
Author's reply ..... Dec. 73
Pipe-flow formulas compared by nomograph, Francis S. Y. Lee (1959, Nov., p. 796)*
Discussion by M. D. Lester ..... Feb. 81
Reply by Mr. Lee ..... Feb. 81
Discussion by E. M. Laursen ..... Mar. 76
Reply by Mr. Lee ..... May 75
Streamlines in a lucite water tunnel, Frank D. Masch ..... Apr. 80*
See also Stream Flow

HYDROELECTRIC POWER
See Penstocks, Power (Hydroelectric), St. Lawrence Seaway and Power Project, Tennessee Valley Authority

LIFT-SLAB METHOD
Lift-slab construction for U.S.G.S. building, George D. Whitmore ..... Jul. 67*
San Francisco, Calif.—13-story building by lift slab and slip form, Herbert Korner Sep. 63*

LIGHTHOUSES
Sweden—telescopic caisson for a lighthouse base, Robert V. Gellerstad ..... Sep. 58*

LOCKS
California builds its first navigation locks ..... Oct. 113
McAlpine Lock and Dam near Louisville, Ky., named by Congress ..... Jul. 89
Old River Lock on Mississippi—construction planning, Ross White ..... Apr. 64*
Old River Lock on Mississippi—unusual features, Waldemar S. Nelson, A. W. Thompson ..... Apr. 60
Tidal basin and lock for a Korean port, Daniel A. Richards ..... Aug. 69*
See also Ports and Maritime Structures, Waterways

MANPOWER, Engineering
Engineering Manpower Commission of EJC reports rise in demand for engineers .. Feb. 87
See also Education

MASONRY
Leakage in masonry and curtain-wall construction, Raymond W. Ehrenberg (1959, Dec., p. 865)*
Discussion by Clayford T. Grimm..Mar. 76

MATERIALS TESTING
Amer. Society for Testing Materials holds annual meeting ..... Aug. 118
ASTM specification A 36 for carbon structural steel ..... Jun. 116
American Society for Testing Materials names new executive secretary ..... Nov. 94

MATHEMATICS
Anayltic geometry solves drafting-room problems, Sidney L. Goldberg ..... Dec. 68*
Square and cube roots by calculating machine, S. G. Roeblad ..... Dec. 72*

MECHANICS
Conference at Purdue Univ. sponsored by ASCE Eng. Mech. Div. ..... Apr. 85
Proceedings of Conferences on Fluid and Solid Mechanics available ..... Jan. 56
Two international experimental mechanics conferences set for 1961 ..... Oct. 116

MEETINGS AND CONFERENCES
EUSEC Conference in Brussels to study engineering education ..... Mar. 74
Pan American Association of Engineering Societies meets in Buenos Aires ..... Mar. 82
Seventh Conference on Coastal Engineering at The Hague ..... Mar. 82
Sixth UPADI Conference held in Buenos Aires ..... Nov. 79

METEOROLOGY

Weather forecasting service set up for cement users ..... Sep. 96

METRIC SYSTEM

Why adopt the metric system, Floyd W. Hough ..... Nov. 73*

MILITARY ENGINEERING, Missiles

Andrews Air Force Base has world's largest air-supported structure, a missile maintenance shelter ..... Jul. 92
Atlas missile bases to have G. E. power ..... Oct. 116
ICBM project near Rapid City, S. Dak . Jul. 91
Vandenberg Air Force Base; construction for missile launching, Norman N. Stout . Feb. 54*
Four new launching bases for ICBM ... Apr. 109

MINING

Gulf of Mexico—a power plant at sea for sulphur mining, H. R. Davies, T. H. Zumwalt ..... Jun. 50*
Gulf of Mexico—seven-mile hot pipeline for sulphur mining, E. J. McNamara .... Apr. 47*

NATIONAL DEFENSE

St. Petersburg, Fla.—storage city built under Gulf of Mexico ..... Sep. 94

NATIONAL SCIENCE FOUNDATION

Change in research grants ..... Feb. 101
Conference at Worcester Polytechnic Institute stresses research ..... Mar. 61
Makes grant for Civil Eng. Education Conference at Univ. of Mich. ..... Apr. 88; Jun. 74; Aug. 106
Sponsors summer institutes for teachers Jan. 93

NIAGARA FALLS

Niagara River Power Development has twin conduits, H. P. Cerutti ..... Jul. 50*

NOMOGRAPHS

Concrete mixes designed by nomograph, Guy F. Tabor, Jr. ..... Mar. 73
Discussion by Norman S. Henning . May 75
Design chart for high-strength penstocks, Joseph T. Gilchrist ..... Jul. 71*
Design chart for vertical stress under square footings, Benjamin Koo ..... Sep. 73*
Pipe-flow formulas compared by nomograph, Frances S. Y. Lee (1959, Nov., p. 796)*
Discussion by M. D. Lester ..... Feb. 81
Reply by Mr. Lee ..... Feb. 81
Discussion by E. M. Laursen ..... Mar. 76
Reply by Mr. Lee ..... May 75
Graphic solution for economic sizes of steel penstocks, Francis S. Y. Lee ..... Jul. 70*
Correction ..... Sep. 74

PANAMA CANAL

Panama Canal—new "mules" for, Robert D. Brown, Jr. ..... Nov. 35*

PARKING

New York offstreet parking plan proposed ..... Mar. 103

PAVEMENTS

California—smooth surface from slip-form paving, R. M. Innis ..... Nov. 44*
Expanded design charts for concrete pavement, Frank McCullough, William B. Ledbetter, Davis L. Ford ..... Jan. 77*
Interstate Highway Route between Chicago and Milwaukee; success with a novel paving plant, Douglas E. Small ..... Jan. 54*
New York, N. Y.—George Washington Bridge —concreting of lower deck started ... Nov. 92
See also Airports, Highways

PENSTOCKS

Design chart for high-strength penstocks, Joseph T. Gilchrist ..... Jul. 71*
Graphic solution for economic sizes of steel penstocks, Francis S. Y. Lee ..... Jul. 70*
Correction by Mr. Lee ..... Sep. 74

PETROLEUM INDUSTRY

Offshore surveying means working under pressure, George E. Jones ..... Aug. 64*
Ozol, Calif.—leakproof concrete tanks for aviation fuel, John J. Closner, Mark M. Porat ..... Apr. 44*
Discussion by J. D. Naillon ..... Jun. 73

PHOTOGRAMMETRY

How to negotiate for photogrammetric mapping services, J. S. Piltz ..... Jul. 68*
Why negotiate for photogrammetric services? A. O. Quinn ..... Nov. 64*

PILES

Boston apartment building; wet rotary preexcavation for piles, Lindsey J. Phares ..... Feb. 64*
Details for a 425-ton pile test, John W. Fowler ..... Dec. 71*
Discussion on use of fuel oil to lubricate steel sheetpiling interlocks by Robert F. Legget ..... Jan. 79
Florida Road Department uses prestressed concrete sheetpiles for bulkheads and retaining walls, W. E. Dean ..... Apr. 68*
New Jersey Highway Department uses colloidal grout to repair concrete piles, Saul Grand ..... Jun. 48*
Oklahoma-Texas highway route across Lake Texoma; exceptional job engineering pays off on bridge construction, Ira E. Williams ..... Jan. 60*

PIPES AND PIPELINES

Apparatus shows critical velocities in pipe flows, J. W. Fortey ..... Oct. 82*
Gulf of Mexico—seven-mile hot pipeline for sulphur mining, E. J. McNamara ..... Apr. 47*
Pipe-flow formulas compared by nomograph, Francis S. Y. Lee ..... Nov. 796*
Discussion by M. D. Lester ..... Feb. 81
Reply by Mr. Lee ..... Feb. 81
Discussion by E. M. Laursen ..... Mar. 76
Reply by Mr. Lee ..... May 75
Steel-pipe-coating symposium: I. Plastic tape, W. J. McCay; II. Asphalt, D. J. McNutt; III. Cement mortar, C. E. Lamar; IV. Somastic materials, Howard E. Lyman; V. Coal tar, H. E. Tillman .. Nov. 68*

PLASTICS

Los Angeles, Calif.—plastic sheathes airport theme structure ..... Dec. 90
Plastic tape as a steel-pipe coating, W. J. McCay ..... Nov. 68*
Utah earth-fill reservoirs given vinyl film liner, Jay R. Anderson ..... Jun. 42*

PORTS AND MARITIME STRUCTURES

Florida Road Department uses prestressed concrete sheetpiles for bulkheads and retaining walls, W. E. Dean ..... Apr. 68*
Gulf of Mexico—a power plant at sea for sulphur mining, H. R. Davies, Jr., T. H. Zumwalt ..... Jun. 50*
Gulf of Mexico—seven-mile hot pipeline for sulphur mining, E. J. McNamara .... Apr. 47*
Israel develops new port and city at Ashod ..... Sep. 92
Korea—tidal basin and lock for a port, Daniel A. Richards ..... Aug. 69*
Krotz Springs, La., on Atchafalaya River—flexible barge dock on a fluctuating river, F. Earl Hogan, L. J. Capozzoli, Jr. ... Jul. 58*
Long Beach Harbor starts passenger-cargo terminal ..... Feb. 100
Miami, Fla., starts construction of new port ..... Sep. 97
New seaport for Miami, Fla ..... Dec. 88
New York plans study of Hudson waterfront ..... Mar. 103
Offshore surveying means working under pressure, George E. Jones ..... Aug. 64*
Prestressed concrete in marine structures, Ben C. Gerwick, Jr. (1959, Nov., p. 782)*
Discussion by J. W. B. Blackman .. Jan. 79
San Diego, Calif., gets ship bunkering facilities for a cargo pier, Joachim E. Liebmann ..... Mar. 69*
See also Locks, Waterways

POWER

ASCE Midwest Sections to hold Power Conference in Kansas City ..... Oct. 98
Power development in the United States, Frank L. Weaver ..... Sep. 70*
World Power Conference, Madrid—U.S. papers chosen ..... Mar. 39
See also Atomic Energy (Power Plants)

POWER, Hydroelectric

Australian underground power project ahead of schedule, Clarence L. Granger .... Jun. 56*
California Mammoth Pool project yields first power ..... Apr. 110
Colombia receives loan to expand electric facilities ..... Jul. 91
Columbia River—Wanapum Hydroelectric Development, C. K. Willey ..... Sep. 65*
Glen Canyon Powerhouse—in model ... Apr. 109
Niagara River Power Development has twin conduits, H. P. Cerutti ..... Jul. 50*
Power partnership and politics, Ralph A. Tudor ..... Sep. 33*
Rhodesia—Kariba Hydroelectric Project dedicated ..... Jul. 88
See also Penstocks, St. Lawrence Seaway and Power Project, Tennessee Valley Authority

POWER, Thermal

Bangkok electric plant gets generator .. Mar. 102
Gulf of Mexico—a power plant at sea for sulphur mining, H. R. Davies, T. H. Zumwalt ..... Jun. 50*
Gulf of Mexico—seven-mile hot pipeline and power plant for sulphur mining, E. M. McNamara ..... Apr. 47*
Japan builds new thermal electric stations, O. D. Ides, R. T. Richards ..... Feb. 46*
New Albany, Ind.—big chimneys create big problems, R. N. Bergstrom ..... Dec. 65*

PROFESSIONAL ADVANCEMENT

The civil engineer's civic responsibility Sep. 48*
The engineer and politics, George D. Clyde ..... Aug. 45*
An implied contract—professional status, N. W. Dougherty ..... Mar. 33*
Publicly employed engineers in professional society activities, John G. Duba ..... Dec. 51*
See also ASCE (Aims and Activities)

PUBLIC WORKS

Ford Foundation makes grant to American Public Works Association ..... Nov. 94
National Public Works Week launched by American Public Works Assoc. ..... Sep. 97

PUMPS AND PUMPING

Pumping saves water and power in fish-passage facilities, R. H. Deurer ..... Nov. 38*

PUZZLES AND PROBLEMS

Exam Gems, department by R. Robinson Rowe, in every issue
Discussion of Exam Gem No. 10 by P. C. Dave (1960, May p. 108) ..... Jul. 69

RAILROADS

Discussion of By-Line Washington reference to railroad capacity, Hal H. Hale ... Nov. 77
Jacksonville, Fla., gets home office building for Atlantic Coast Line RR, D. B. Packard ..... Mar. 56*
The rail commuter problem, W. W. Patchell ..... Dec. 56*

RAPID TRANSIT

The rail commuter problem, W. W. Patchell ..... Dec. 56*

RECLAMATION OF LAND

Pakistan to reclaim salt-spoiled areas .. Dec. 88
San Francisco home developers stabilize marginal lands, Michael Praszker ..... Feb. 68*

REFUSE DISPOSAL

New York refuse-transfer terminal repaired after a fire ..... Jun. 54*
Seattle, Wash., storm drainage and gas burning at a refuse disposal site, Walter L. Dunn ..... Aug. 68*

REGISTRATION OF ENGINEERS

NCSBEE adopts revised Model Law ... Oct. 93
West Virginia Registration Board adds classification ..... Sep. 94

RESEARCH

ASEE Council prepares review of college research projects ..... Feb. 84
Bakhmeteff Research Fellowship available ..... Nov. 81
Guide to government grants in research issued ..... Apr. 111
The role of research in civil engineering, Morrough P. O'Brien ..... Jun. 33*
See also ASCE (Research)

RESERVOIRS

Pawtucket, R. I., reservoir has arched aluminum roof ..... Apr. 110
Utah earth-fill reservoirs given vinyl film liner, Jay R. Anderson ..... Jun. 42*

RIVERS

Blue Nile—multipurpose investigation, Alfred Golzé (1959, Oct., p. 695)*
Correction by Mr. Golzé ..... Jan. 79
Mississippi—Old River Lock (symposium): I. Unusual features, Waldemar S. Nelson, A. W. Thompson; II. Construction planning, Ross White ..... Apr. 64*

ROAD TESTS

The AASHO Road Test, Fred Burggraf, W. B. McKendrick ..... Jan. 35*
AASHO Road Test to be extended ..... Jul. 89

ROOFS

New York's George Washington Bridge Bus Station has unique roof ..... May 105
Portland Oreg., Memorial Coliseum has cantilevered steel-frame roof, John T. Merrifield ..... Mar. 44*
San Antonio, Tex., Villita Assembly Building has cable-suspended roof, W. E. Simpson ..... Nov. 63*
Seattle, Wash., aluminum roof for coliseum ..... Sep. 93
Thin-shell parabolic barrel arches roof Providence Post Office ..... Dec. 88
See also Buildings

ST. LAWRENCE SEAWAY AND POWER PROJECT

Wins ASCE Achievement Award ..... Apr. 76; Jun. 44

SALARIES AND FEES

An examination of civil engineers' compensation, Oscar S. Bray ..... Nov. 41*
Percentage fees for engineering services, Gustav J. Requardt, Frederick R. Knoop, Jr. ..... Dec. 48*
Survey report of National Society of Professional Engineers, "The Role of the Consulting Engineer in Federal Public Works Projects," available ..... Jun. 77
Trends in employment conditions in relation to remuneration in public practice, Irving F. Ashworth ..... Mar. 50*

SALES ENGINEERING

Sales engineering is professional, Harvey Leaver ..... Nov. 37*

SANITARY ENGINEERING

ASCE Sanitary Engineering Division Conference in Cincinnati ..... Feb. 50
FSIWA renamed Water Pollution Control Federation ..... Feb. 99
See also Mosquito Control

SATELLITES

See Space Exploration

SCHOOLS

See Buildings (Schools)

SEWAGE TREATMENT

Allegheny County, Pa., Sewage Disposal System gets ASCE Achievement Award Honorable Mention ..... Jun. 45
California community uses waste stabilization basins for a desert sewage treatment plant, Ralph Stone ..... Mar. 42*
London plant utilizes sludge gas ..... Jan. 92
Ten-year index to *Sewage and Industrial Wastes* ..... Jan. 92
Sacramento, Calif.—reducing sewage plant odors in a residential area, W. S. Hyde, Oct. 77*
Third Conference on Biological Waste Treatment at Manhattan College ..... Feb. 98
USPHS grant for study of sewage ponds ..... Apr. 114
Washington, D. C., experimental digester installations to increase capacity, Hugh A. Schreiber ..... Feb. 35*

SEWERS

ASCE Manual No. 37, "Design and Construction of Storm and Sanitary Sewers," issued ..... Feb. 60; Jun. 80
Corrections to ..... Jul. 79
Discussion by M. G. Spangler ..... Oct. 108
Reply by Manual Editing Committee ..... Dec. 75
Boston's South Charles Relief Sewer holed through ..... Jul. 90
Richmond, Ind., well points win dewatering battle in sewer tunnel, Gilbert M. Turner, W. D. Murphy ..... Jul. 48*
U. S. to use 2.7 billion ft of pipe by 1975 ..... Feb. 101
Sewer corrosion and protective coatings, C. G. Munger ..... May 57*

SKI JUMPS

Squaw Valley, Calif., ski jumps, Daniel Shapiro ..... Jan. 76*

SKYSCRAPERS

See Buildings (Skyscrapers)

SLABS

Spacing of shear connectors for composite sections, Les N. Francis ..... Dec. 70*

SLIDE RULES

Slope distances by slide rule, Burton G. Dwyre ..... Nov. 76*

SOCIETIES OF ENGINEERS

ASME and AIChE hold meetings ..... Jan. 46
Bahamas—engineers and architects form society ..... Sep. 75
Engineering Institute of Canada has new president, G. M. Dick ..... Apr. 111

SOIL MECHANICS

Book, *From Theory to Practice in Soil Mechanics*, includes important writings of Dr. Karl Terzaghi ..... Dec. 75
California housing developments in hillside environments, G. Austin Schroter and Ray O. Maurseth ..... Jun. 66*
Estimating the relative density of sands, Bonner S. Coffman ..... Oct. 79*
Madison Canyon, Mont.—Hebgen Dam damaged by Madison Canyon slide, Keith R. Barney ..... Aug. 72*
Discussion by Gray Edwards ..... Oct. 108
Peru—experience with expansive clay, Forrest D. Clark ..... May 42*
Discussion by W. Irvine Low ..... Sep. 74
Discussion by N. Sanyal ..... Nov. 77
Reply by Mr. Clark ..... Nov. 77
Program of Research Conference on Shear Strength of Cohesive Soils (Boulder, Colo.)—program ..... May 73
Activities described ..... Aug. 104
San Francisco, Calif.—bottom of San Francisco Bay evaluated for Trans-Bay Tube, R. J. Swain ..... Nov. 66*

SPACE EXPLORATION

See Military Engineering (Missiles)

STADIUMS

See Buildings (Auditoriums and Stadiums)

STAGES

Toronto, Canada, builds a mobile stage for annual exhibition, F. I. L. Dyke ..... Jun. 64*

STEEL

ASTM specification A 36 for carbon structural steel ..... Jun. 116
A 36 specification for structural steel revised ..... Sep. 94
Awards for most beautiful steel bridges opened in 1959 by AISC ..... Nov. 91
Bethlehem Steel Co. offers new structural sections ..... Dec. 90
Booklet of U. S. Steel covers 15 winning bridge designs ..... Mar. 104
California Division of Highways uses high-strength steels for bridges, Leonard C. Hollister, R. D. Sunbury ..... Jun. 60*
Philadelphia's Vine Street Bridge gets AISC award ..... Feb. 43
Steel output in first ten months of 1960 ..... Dec. 91
Steel Scaffolding and Shoring Institute formed ..... Dec. 89
U. S. capacity reaches new high ..... Feb. 102
World outlays increase ..... May 105

STREAM FLOW

VeriKlag scale for stream-flow routing, Delmar J. Taylor ..... Oct. 80*

STRUCTURAL ENGINEERING

A chart for intermediate moments, Keith A. Kelly ..... Mar. 74*
Computer designs steel—a floor at a time, John H. Wells (1959 Jun., p. 414)*
Discussion by M. B. Card ..... Apr. 82
Computing prestressed concrete composite sections, Hans R. Schaeffer ..... Jun. 72*
Discussion by Kenneth Diao ..... Aug. 92
Discussion on use of shear connectors in composite sections, George T. Williams .. Oct. 108
M-m tables for deflection calculations, H. H. Fickel ..... Jun. 70*
Discussion by Abraham Woolf ..... Aug. 93
Discussion by R. C. Lofgren ..... Aug. 93
Discussion by T. F. Hickerson ..... Nov. 76
Quick, inexpensive, and accurate wire models, R. L. Sanks ..... Apr. 71*
Welded angle connections—design shortcut, Allan W. Gilman ..... May 72*
See also Beams, Columns, Framed Structures, Girders

SUBWAYS

New York subway built using permanent steel as shoring, Henry Goldfinger ... Mar. 47*

SURVEYING AND MAPPING

ASCE Board of Direction clarifies status of surveying and mapping ..... Aug. 112
Discussion of term, "Unions for Surveyors?" in "The Younger Viewpoint," Feb. 1960, by W. S. Dix ..... Apr. 82
George Washington Survey Office dedicated ..... Apr. 85
Offshore surveying means working under pressure, George E. Jones ..... Aug. 64*
Slope distances by slide rule, Burton G. Dwyre ..... Nov. 76*
Surveying instruments in mils, John J. Durkin ..... Jun. 59*
Correction by R. P. Spiro ..... Aug. 93
Texas surveyors meet with Southwestern Regional Conference of American Congress on Surveying and Mapping ..... Dec. 91
See also Photogrammetry

TANKS

Ozol, Calif.—leakproof concrete tanks for aviation fuel, John J. Closner, Mark M. Porat ..... Apr. 44*
Discussion by J. D. Naillon ..... Jun. 73

TELESCOPES

Ford Foundation gives money for astrograph ..... Nov. 90
Puerto Rico—giant radio telescope to be built ..... Oct. 112

TENNESSEE VALLEY AUTHORITY

Johnsonville Steam Plant, report on, issued ..... May 104
Third volume on design of hydro plants issued ..... Nov. 93
See also Power

TOWERS

Cape Girardeau, Mo.—TV antenna tower, world's tallest structure, Orville Pelkey, Austin C. Woodward ..... Dec. 33*
Quebec Hydro-Electric Commission finds interrupted-rib bolts advantageous for towers, S. C. Dickerhoff, Jr. ..... Feb. 52*
Southern California Edison Co.—transmission-line construction by helicopter, Frederick R. Payne, Jr. ..... May 33*

TRAFFIC

Traffic and transportation in urban renewal, Wilbur S. Smith ..... Oct. 45*

TRANSMISSION LINES

Southern California Edison Co.—transmission-line construction by helicopter, Frederick R. Payne, Jr. ..... May 33*

TRANSPORTATION

Ford Foundation gives funds for transportation study ..... Oct. 115
The rail commuter problem, W. W. Patchell ..... Dec. 56*
Traffic and transportation in urban renewal, Wilbur S. Smith ..... Oct. 45*
Transportation studies summarized by Univ. of Calif. ..... Apr. 112

TROPICAL ENGINEERING

Adverse weather—its effect on design and construction (wet hot), Palmer W. Roberts ..... Jun. 35*
Discussion by Douglas S. Laidlaw Aug. 93
Discussion by William Weaver, Jr. Dec. 74

TRUSSES

Calumet City, Ill.—bridge dismantled without falsework ..... Aug. 48*

TUNNELS

Chesapeake Bay—long concrete trestle and tunnel for bay crossing ..... Dec. 89
Chesapeake Bay Project financed ..... Oct. 112
Fort Lauderdale, Fla., highway tunnel under New River anchored in sand, George F. Poland ..... Mar. 59*
New York—concreting the West Delaware Water Supply Tunnel, Gail Knight .. Dec. 42*
New York subway built using permanent steel as shoring, Henry Goldfinger ... Mar. 47*
Peoria, Ill.—prefabricated pipe-arch highway tunnels of record size ..... Dec. 94
Richmond, Ind.—well points win dewatering battle in sewer tunnel, Gilbert M. Turner, W. D. Murphy ..... Jul. 48*
San Francisco Trans-Bay tube project studied ..... Feb. 99
San Francisco, Calif.—bottom of San Francisco Bay evaluated for Trans-Bay Tube, R. J. Swain ..... Nov. 66*
Webster Street vehicular tube under San Francisco Bay, Paul E. Parker ..... Apr. 77*

UNITED ENGINEERING CENTER

Cornerstone laid for UEC ..... Jul. 42
Progress in drive for funds, Jan. 42; Feb. 58; Mar. 40; Apr. 83; May 40; Jun. 46; Jul. 43; Aug. 102; Sept. 50; Oct. 92
UEC topped out ..... Aug. 102
United Engineering Center (symposium): I. All-welded structure, Samuel C. Bast; II. Steel frame, Philip Kleiner ..... Jul. 62*

U.S. AIR FORCE

Air Force Civil Engineer starts publication ..... May 105
Giant wind tunnel nears completion ... Feb. 100

U.S. COAST AND GEODETIC SURVEY

Reorganized for improved research ..... Sep. 96

U.S. CORPS OF ENGINEERS

Discussion of By-line Washington on use of private consultants by Corps of Engineers, E. C. Itschner ..... Aug. 93
Nashville District absorbs Tullahoma District ..... Oct. 113
Waterways Experiment Station plans rebuilding after fire ..... Dec. 90

U.S. GEOLOGICAL SURVEY

California mapping center for, opened .. Jan. 90

VOLCANOES

Hawaii—town innundated by lava flow . Apr. 110

WAREHOUSES

See Buildings (Warehouses)

WATER POLICY

Arizona awarded Colorado River water . Jun. 114
California—water plan, Harvey O. Banks ..... Dec. 52*

WATER POLLUTION

ASCE to aid in National Water Pollution Conference ..... Jul. 75; Oct. 112

Conference on, of ASCE Sanitary Eng. Div. in Cincinnati ..... Feb. 50
Water Pollution Control Federation has annual meeting ..... Nov. 90

WATER SUPPLY

California—water plan, Harvey O. Banks. Dec. 52*
Los Angeles, Calif.—collapsible dam aids water supply, Norman M. Imbertson ... Sep. 42*
St. Louis builds improved water line ... Feb. 100

See also Aqueducts

WATER TREATMENT

California sea-water conversion plant in operation ..... Mar. 101
Charlotte, N. C., Hoskins water purification plant, George S. Rawlins ..... Apr. 41*
Fort Worth, Tex.—prototype electrodialysis plant built ..... Jul. 90
San Diego, Calif.—contract let for sea water conversion plant ..... Dec. 95
Solids-contact units for water treatment (symposium): I. Introduction and design features, A. A. Kalinske; II. The new plant at Omaha, Richard O. Davis ... Dec. 60*
Washington, D. C.—Potomac River Water Filtration Plant at Rockville, Md. started Dec. 90

WATERWAYS

Krotz Springs, La.—flexible barge dock on a fluctuating river, F. Earl Hogan, Louis J. Capozzoli ..... Jul. 58*
Mississippi River—Old River Lock, unusual features, W. S. Nelson, A. W. Thompson Apr. 60
Mississippi River—Old River Lock, construction planning, Ross White ..... Apr. 64

See also Locks, Ports and Maritime Structures

WATER WORKS

AWWA holds eightieth annual meeting . Jun. 112
AWWA nominates officers and awards honors ..... Mar. 102
Chicago to spend $45 million for ..... Jan. 90

WAVES

Chile earthquake spreads disaster round world ..... Jul. 88
Discussion by Thorndike Saville, Jr. Sep. 74

WELDING

Shrinkage control in welding, Omer W. Blodgett ..... Nov. 56*
Undergraduate award program announced by James F. Lincoln Arc Welding Foundation ..... Nov. 93
United Engineering Center, New York (symposium): I. All-welded structure, Samuel C. Bast II. Steel frame, Philip Kleiner Jul. 62*
Welded angle connections—design shortcut, Allan W. Gilman ..... May 72*
Why not more welded structures? Van Rensselaer P. Saxe ..... Aug. 53*
Discussion by William T. St. Clair. Dec. 74
Discussion by M. C. Magnuson ..... Dec. 74
Author's reply ..... Dec. 74

WELLPOINTS

New York, N. Y.—Narrows Bridge; wellpoints dewater pier sites, John F. Hoffman ..... Oct. 71*
Richmond, Ind.—well points win dewatering battle in sewer tunnel, Gilbert M. Turner, W. D. Murphy ..... Jul. 48*

Name Index

ABERNATHY, JAMES M.
Discussion on "Urban renewal and federal legislation," R. L. Diekman ..... Dec. 73

ANDERSON, ARTHUR R.
Composite construction in precast and cast-in-place concrete ..... Mar. 34*

ANDERSON, JAY R.
Utah—vinyl film liner for earth-fill reservoirs ..... Jun. 42*

ANDREWS, EARLE T.
Elected ASCE Director, District 6 ..... Oct. 84

ASHWORTH, IRVING F.
Trends in employment conditions in relation to renumeration in public practice ... Mar. 50*

ATKINSON, GUY F.
Elected Honorary Member of ASCE ... Oct. 86

BANKS, HARVEY O.
California—water plan ..... Dec. 52*

BARKLEY, ROBERT E.
Chattanooga, Tenn.—integrated improvements ..... Oct. 61*

BARNEY, KEITH R.
Madison Canyon, Mont.—Hebgen Dam damaged by Madison Canyon slide ..... Aug. 72*
Discussion by Gray Edwards ..... Oct. 108

BAST, SAMUEL C.
United Engineering Center—all-welded structure ..... Jul. 62*

BERGGREN, R. ALAN
Discussion of bridge clearances for missile transport ..... Jul. 69

BERGSTROM, R. N.
New Albany, Ind.—big chimneys create big problems ..... Dec. 54*

BERTWELL, W.
Factors of safety for a footing against overturning or sliding (1959, Nov., p. 797)*
Discussion by Marcel Bitoun ..... Mar. 76
Reply by Mr. Bertwell ..... Mar. 77

BITOUN, MARCEL
Discussion on "Factors of safety against overturning or sliding," W. Bertwell (1959, Nov., p. 797)* ..... Mar. 76

BLACKMAN, J. W. B.
Discussion on "Prestressed concrete in marine structures," Ben C. Gerwick, Jr. (1959, Nov., p. 782)* ..... Jan. 79

BLODGETT, OMER W.
Shrinkage control in welding ..... Nov. 56*

BRAY, OSCAR S.
An examination of civil engineers' compensation ..... Nov. 41*

BREGMAN, DONALD
Reply to discussers of his article, "Determining the lateral deflection and permissible loads on columns" (1959, Oct., p. 714) Jan. 79

BROWN, ROBERT D., JR.
Panama Canal—new "mules" for ..... Nov. 35*

BRUNKOW, NORMAN F.
Discussion of "Extra-large bars for reinforced concrete columns," Vernon E. Swanson ..... Apr. 82

BUCK, HENRY W.
Elected ASCE Director, District 2 ..... Oct. 84

BURGGRAF, FRED
The AASHO Road Test, W. B. McKendrick, Jr., co-author ..... Jan. 35*

CAMBELL, CHESTER W.
ASCE Fellow chosen president of the Moles Jun. 115

CAMPBELL, RUTH
Associate Editor of CIVIL ENGINEERING on its staff 30 years ..... Oct. 56

CAPOZZOLI, LOUIS J.
Krotz Springs, La.—flexible barge dock on a fluctuating river, F. Earl Hogan, co-author Jul. 58*

CARD, M. B.
Discussion of "Computer designs steel a floor at a time," John H. Wells (1959, June, p. 414) ..... Apr. 82

CASS, ALBERT
Suffolk County, N. Y.—ownership of dredge boosts program ..... Aug. 47*

CASS, JAMES R., JR.
Brockton, Mass., supermarket; steel joists lower unit costs ..... Apr. 58*

CEFOLA, ANSELM
Spacing of vertical stirrups in beams ... Oct. 81

CERUTTI, H. P.
Niagara River Power Development has twin conduits ..... Jul. 50*

CHANDLER, E. L.
First winner of ASCE Professional Achievement Award ..... Apr. 88
Retires as ASCE Assistant Secretary ... May 77

CHRISTMAN, H. E.
Hanson Dam, Green River, Wash.—bolts stabilize high rock slopes ..... Feb. 62*

CLAIRE, WILLIAM H.
California—urban renewal problems with an exploding population ..... Oct. 48*

CLARK, FORREST D.
Peru—experience with expansive clay ... May 42*
Discussion by W. Irvine Low ..... Sep. 74
Discussion by N. Sanyal ..... Nov. 77
Reply by author ..... Nov. 77

CLEMENTS, J. R.
Aggregates and aggravations of heavy-weight concrete, L. D. Long co-author (1959, Dec., p. 876)*
Discussion by John C. King ..... Mar. 75
Reply by Mr. Long ..... Mar. 75

CLOSNER, JOHN J.
Ozol, Calif.—jet-fuel depot gets leakproof concrete tanks, Mark M. Porat, co-author Apr. 44*
Discussion by J. D. Naillon ..... Jun. 73

CLYDE, GEORGE D.
The engineer and politics ..... Aug. 45*

COFFMAN, BONNER S.
Estimating the relative density of sands. Oct. 79*

COYNE, ANDRE
ASCE Honorary Member, dies ..... Sep. 54

CUMMINS, ROBERT J.
ASCE Honorary Member, dies ..... Aug. 108

DARLING, JAMES W.
Discussion of a first edition of Trautwine's *The Civil Engineer's Pocket-Book* .... Dec. 75

DAVE, P. C.
Discussion of Exam Gem No. 10 (1960, May, p. 108) ..... Jul. 69

DAVIES, H. R., JR.
Gulf of Mexico—a power plant at sea for sulphur mining, T. H. Zumwalt co-author Jun. 50*

DAVIS, HARMER E.
Elected ASCE Director, District 11 ..... Oct. 85

DAVIS, RICHARD O.
Solids-contact units for water treatment—the new plant at Omaha ..... Dec. 62*

DEAN, W. E.
Florida Road Dept. uses prestressed concrete sheetpiles for bulkheads and retaining walls ..... Apr. 68*
Florida precast, prestressed sections for bridges ..... Jul. 54*

DEURER, R. H.
Pumping saves water and power in fish-passage facilities ..... Nov. 38*

DIAO, KENNETH
Discussion of "Computing prestressed concrete composite sections," Hans R. Schaeffer Aug. 92

DICKERHOFF, S. C., JR.
Quebec Hydro-Electric Commission finds interrupted-rib bolts advantageous for towers Feb. 53*

DICKMAN, R. L.
Urban renewal and federal legislation ... Oct. 43*
Discussion by James M. Abernathy . Dec. 73

DIEMER, ROBERT B.
San Diego Aqueduct paved by a crawler-mounted slip form ..... Mar. 64*

DIX, W. S.
Discussion of "The Younger Viewpoint" (1960, Feb., p. 88) ..... Apr. 82

DOOLEY, C. T.
Seattle, Wash.—office building utilizes open-web beams, H. I. Johnson, Jr. co-author Mar. 52*

DOUGHERTY, N. W.
An implied contract—professional status. Mar. 33*

DOYNE, MORGAN I.
St. Louis, Mo.—stiff-leg derrick solves mud problem on parking structure ..... Sep. 56*

DUBA, JOHN G.
Publicly employed engineers in professional society activities ..... Dec. 51*

DUNAWAY, PAUL H.
Abiquiu Dam, N. Mex.—new tools for earth-dam construction ..... Sep. 35*

DUNN, WALTER L.
Seattle, Wash.—storm drainage and gas burning at a refuse disposal site ..... Aug. 68*

DURKEE, E. L.
New York, N. Y.—George Washington Bridge, erection of lower deck ..... Jul. 35*

DURKIN, JOHN J.
Surveying instruments in mils ..... Jun. 59*
Correction by R. P. Spiro ..... Aug. 93

DWYRE, BURTON G.
Slope distances by slide rule ..... Nov. 76*

DYKE, F. I. L.
Toronto, Canada, builds a mobile stage for annual exhibition ..... Jun. 64*

EDWARDS, GRAY
Discussion on "Madison Canyon slide," Keith R. Barney ..... Oct. 108

FADUM, R. E.
The case for professional schools of engineering ..... Aug. 80*
Discussion by M. D. Morris ..... Oct. 108

FENVES, STEVEN J.
Discussion on "slickerization" of CIVIL ENGINEERING ..... Aug. 93

FICKEL, H. H.
M-m tables for deflection calculations .. Jun. 70*
Discussion by Abraham Woolf ..... Aug. 93
Discussion by R. C. Lofgren ..... Aug. 93
Discussion by T. F. Hickerson ..... Nov. 76

FINCH, JAMES K.
His *The Story of Engineering* published in Anchor Book series ..... Aug. 119

FISK, JOHN H.
Assistant to ASCE Secretary .. May 81; Sep. 55

FLORMAN, S. C.
Reply to discussers of his article, "The civil engineer in fiction" (1959, Aug., p. 544) Jan. 79

FORD, DAVIS L.
Expanded design charts for concrete pavements, Frank McCullough, William B. Ledbetter, co-authors ..... Jan. 77*

FORTEY, J. W.
Apparatus shows critical velocities in pipe flow ..... Oct. 82*

FOWLER, JOHN W.
Details for a 425-ton pile test ..... Dec. 71*

FRANCIS, LES N.
Spacing of shear connectors for composite sections ..... Dec. 70*

FRASER, J. ROY
Ada, Okla.—5½-mile conveyor belt supported by concrete frame ..... Feb. 38*

GARAVAGLIA, MARCELLO G.
Horsham, Pa.—prestressed concrete resists fire damage, Charles C. Zollman, Aviv Rubin, co-authors ..... Dec. 36*

GEBERT, HAROLD H.
Philadelphia, Pa.—Penn Center House, cooperative apartment in renewal project . Oct. 58*

GELLERSTAD, ROBERT V.
Sweden—telescopic caisson for a lighthouse base ..... Sep. 58*

GENSERT, R. M.
Columbus, Ohio, racetrack has hyperbolic paraboloid roof for grandstand ..... May 49*

GILCHRIST, JOSEPH T.
Design chart for high-strength penstocks Jul. 71*

GILMAN, ALLAN W.
Welded angle connections—design shortcut May 72*

GILMAN, ROGER H.
Elected ASCE Director, District 1 ..... Oct. 84

GOLDBERG, SIDNEY L.
Analytic geometry solves drafting-room problems ..... Dec. 68*

GOLDFINGER, HENRY
New York subway built using permanent steel as shoring ..... Mar. 47*

GOLZE, ALFRED R.
Correction for his article, "Multipurpose investigation of the Blue Nile" (1959, Oct., p. 695)* ..... Jan. 79

GOODELL, H. L.
Discussion of R. S. Mayo's letter on notable civil engineers of the Civil War ..... Oct. 108

GOUTY, OTIS
Assistant to the Secretary ..... Sep. 55

GRAND, SAUL
New Jersey Highway Department uses colloidal grout to repair concrete piles ..... Jun. 48*

GRANGER, CLARENCE L.
Australian underground power project ahead of schedule ..... Jun. 56*

GRENNAN, PHILIP M.
New Jersey—a warehouse and a switching station built with prestressed concrete. May 36*

GRIMM, CLAYFORD T.
Discussion on "Leakage in masonry and curtain-wall construction," R. W. Ehrenberg (1959, Dec., p. 865)* ..... Mar. 76

GRONQUIST, C. H.
Hammerhead piers carry Richmond-Petersburg, Va., turnpike bridge, D. B. Steinman, co-author (1959, Nov., p. 774)*
Correction by Mr. Gronquist ..... Jan. 79

HADLEY, HOMER M.
Cascade Mountains, Washington—heavy-duty composite bridge ..... May 44*

HAERTLEIN, ALBERT
Honorary Member of ASCE, dies ..... Jul. 79

HALE, HAL H.
Discussion of By-line Washington reference to railroad capacity ..... Nov. 77

HANLY, HUNTER W.
Discussion on large-size steel used in 1903 Jun. 73

HARDING, JAMES C.
ASCE Fellow named member of President's Committee for Traffic Safety ..... Jul. 79

HARRINGTON, E. R.
Engineers, atomic physics, and mathematics Feb. 42*
Discussion by L. K. Himelright .... Apr. 82

HEDLEY, WILLIAM J.
Elected ASCE Vice President, Zone III. Oct. 83

HENNING, NORMAN E.
Discussion of "Concrete mixes designed by monograph," Guy F. Tabor, Jr. ..... May 75

HICKERSON, T. F.
Discussion on "M-m tables for deflection calculations," H. H. Fickel ..... Nov. 76

HIMELRIGHT, L. K.
Discussion of article, "Engineers, atomic physics and mathematics," E. R. Harrington ..... Apr. 82

HOFFMAN, JOHN F.
New York, N. Y.—Narrows Bridge; well-points dewater pier sites ..... Oct. 71*

HOGAN, F. EARL
Krotz Springs, La.—flexible barge dock on a fluctuating river, Louis J. Capozzoli, co-author ..... Jul. 58*

HOLCOMB, GLENN W.
Nominated for ASCE President ..... Jul. 41
Elected 92nd President of ASCE ..... Oct. 83
Inaugural Address as President of ASCE, Time for action ..... Nov. 33*

HOLLISTER, LEONARD C.
California Division of Highways uses high-strength steels for bridges, R. D. Sunbury co-author ..... Jun. 60*

HOLLISTER, SOLOMON C.
Elected Honorary Member of ASCE .... Oct. 86

HOOVER, HERBERT
New York Society of Association Executives presents scroll to ..... Jan. 24

HOUGH, FLOYD W.
Why adopt the metric system ..... Nov. 73*

HOWSON, LOUIS R.
Named Chicago Civil Engineer of the Year Jan. 67

HUBER, WALTER L.
ASCE Past President, dies ..... Jul. 75

HUNT, HAL W.
CIVIL ENGINEERING, thirty years of engineered progress ..... Oct. 53*

HYDE, W. S.
Sacramento, Calif.—reducing sewage-plant odors in a residential area ..... Oct. 77*

IDES, O. D.
Japan's new thermal electric stations, R. T. Richards, co-author ..... Feb. 46*

IMBERTSON, NORMAN M.
Los Angeles, Calif.—collapsible dam aids water supply ..... Sep. 42*

INNIS, R. M.
California—smooth surface from slip-form paving ..... Nov. 44*

ISELIN, DONALD G.
Construction problems of nuclear power plants ..... Oct. 64*

ITSCHNER, E. C.
Discussion on use of private consultants by Corps of Engineers ..... Aug. 93

JESSUP, MARY E.
Younger member—what now? ..... Jan. 80
CIVIL ENGINEERING—thirty years of ASCE in ..... Oct. 56*
News Editor of CIVIL ENGINEERING, on its staff 30 years ..... Oct. 56

JOHNSON, H. I., JR.
Seattle, Wash., office building utilizes open-web beams, C. T. Dooley, co-author. Mar. 52*

JOHNSON, PAGE
Road-surface maintenance in Maine .... Jan. 73*

JONES, ALLEN, JR.
A rubber stamp for beam design ..... Mar. 72*

JONES, GEORGE E.
Offshore surveying means working under pressure ..... Aug. 64*

JONES, JONATHAN
ASCE Honorary Member, dies ..... Aug. 108

KAAR, PAUL H.
Laboratory tests of continuity in precast-prestressed bridges, Alan H. Mattock, co-author ..... Sep. 38*

KALINSKE, A. A.
Solids-contact units for water treatment—introduction and design features ..... Dec. 60*

KELLY, KEITH A.
A chart for intermediate moments ..... Mar. 74*

KENT, JOSEPH C.
Open-air tube in tank solves many problems ..... Aug. 96*
Discussion by B. W. Sarjeant ..... Dec. 73
Author's reply ..... Dec. 73

KEREKES, FRANK
Elected Honorary Member of ASCE ... Oct. 87

KILLIAN, JAMES
Address on engineers in public life at ASCE Boston Convention luncheon ..... Nov. 65

KING, DON
Assistant to the Secretary ..... Sep. 55

KING, JOHN C.
Discussion on "Aggregates and aggravations of heavy-weight concrete," L. D. Long, J. R. Clements (1959, Dec., p. 876)*. Mar. 75

KIRKPATRICK, E. STUART
Made Executive Assistant to the Secretary Sep. 55

KLEINER, PHILIP
United Engineering Center—steel frame . Jul. 65*

KNIGHT, GAIL
New York—concreting the West Delaware Water Supply Tunnel ..... Dec. 42*

KNOOP, FREDERICK R., JR.
Percentage fees for engineering services, Gustav J. Requardt, co-author ..... Dec. 48*

KOO, BENJAMIN
Design chart for vertical stress under square footings ..... Sep. 73*

KORNER, HERBERT
San Francisco, Calif.—13-story building by lift slab and slip form ..... Sep. 63*

KOZAK, JOHN J.
Discussion excerpted from letters on "Electronic computer applications" (1959, Dec., p. 886). ..... Mar. 75

LAIDLAW, DOUGLAS S.
Discussion of "Adverse weather—its effect on design and construction (wet hot)," Palmer W. Roberts ..... Aug. 93
Discussion by William Weaver, Jr., Lec. 74

LAMAR, C. E.
Cement mortar as a steel-pipe coating . Nov. 70*

LANG, C. H.
Geometric design of modern highways . Jan. 63*

LAURSEN, EMMET M.
Discussion of "Pipe-flow formulas compared by nomograph," Francis S. Y. Lee (1959, Nov., p. 796)* ..... Mar. 76

LEAVER, HARVEY
Sales engineering is professional ..... Nov. 37*

LEDBETTER, WILLIAM B.
Expanded design charts for concrete pavements, Frank McCullough, Davis L. Ford, co-authors ..... Jan. 77*

LEE, FRANCIS S. Y.
Pipe-flow formulas compared by nomograph (1959, Nov., p. 796)*
Discussion by M. D. Lester ..... Feb. 81
Reply by Mr. Lee ..... Feb. 81
Discussion by E. M. Laursen ..... Mar. 76
Reply by Mr. Lee ..... May 75
Graphic solution for economic sizes of steel penstocks ..... Jul. 70*
Correction by Mr. Lee ..... Sep. 74

LEGGETT, ROBERT F.
Discussion on use of fuel oil to lubricate interlocks of sheetpiling (1959, Nov., p. 773) Jan. 79
Discussion deploring "slickerization" of CIVIL ENGINEERING ..... Jun. 73

LELAND, GEORGE H.
Discussion on "Ohio develops specifications for consulting services," Everett S. Preston Mar. 76

LELIAVSKY, SERGE
Discussion on uplift on dams, in Exam Gems (1959, Oct., p. 754) ..... Feb. 82

LESTER, MURRAY D.
Discussion of "Pipe-flow formulas compared by nomograph," Francis S. Y. Lee (1959, Nov., p. 796)* ..... Feb. 81

LIEBMANN, J. E.
San Diego, Calif., gets ship bunkering facilities for a general cargo pier ..... Mar. 69*

LOCKE, DONALD R.
Norfolk, Va., builds for the future, J. H. Weidman, co-author ..... Oct. 68*

LOCKWOOD, R. K.
What ASCE has done to improve employment conditions ..... Feb. 33*

LOFGREN, R. C.
Discussion on "M-m tables for deflection calculations," H. H. Fickel ..... Aug. 93

LONG, L. D.
Aggregates and aggravations of heavy-weight concrete, J. R. Clements co-author (1959, Dec., p. 876)*
Discussion by John C. King ..... Mar. 75
Reply by Mr. Long ..... Mar. 75

LOW, W. IRVINE
Discussion on "Experience with expansive clay in Peru," Forrest D. Clark ..... Sep. 74

LYMAN, HOWARD E.
Somastic materials as a steel-pipe coating Nov. 70*

LYNCH, EDMOND B.
The Dall flow tube ..... Mar. 66*

MAGNUSON, M. C.
Discussion of "Why not more welded structures?" Van Rensselaer P. Saxe ..... Dec. 74

MANNING, J. J.
How to get quality concrete ..... Jun. 40*

MARSTON, FRANK A.
Annual Address as President of ASCE, Progress in ASCE ..... Jul. 33*

MASCH, FRANK D.
Streamlines in a lucite water tunnel .... Apr. 80*

MATTERN, DONALD H.
Elected ASCE Vice President, Zone II .. Oct. 83

MATTOCK, ALAN H.
Laboratory tests of continuity in precast-prestressed bridges, Paul H. Kaar, co-author ..... Sep. 38*

MAURSETH, RAY O.
California housing developments in hillside environments, G. Austin Schroter co-author Jun. 66*

MAY, AUBREY D.
Does the civil engineer need ASCE? .... Feb. 67*

MAYO, ROBERT S.
Discussion on notable civil engineers of the Civil War ..... Jul. 69
Discussion by H. L. Goodell ..... Oct. 108

McBRIDE, LEWIS W.
Pakistan and Iran—international civil airports under construction by Corps of Engineers, William O. Tatum, III, co-author ... Sep. 45*

McCARTNEY, JAMES H.
Pennsylvania State University's all-steel-deck stadium moved to new site ..... Oct. 74*

McCAY, W. J.
Plastic tape as a steel-pipe coating ..... Nov. 68*

McCULLOUGH, FRANK
Expanded design charts for concrete pavement, William B. Ledbetter, Davis L. Ford, co-authors ..... Jan. 77*

McKENDRICK, W. B., JR.
The AASHO Road Test, Fred Burggraf, co-author ..... Jan. 35*

McNAMARA, E. J.
Gulf of Mexico—seven-mile hot pipeline. Apr. 47*

McNUTT, D. J.
Asphalt as a steel-pipe coating ..... Nov. 68*

MERRIFIELD, JOHN T.
Portland, Oreg.—Memorial Coliseum has cantilevered steel-frame roof ..... Mar. 44*

MILHAN, D. W.
Pensacola Bay, Fla.—bridge towed 200 miles for erection ..... Aug. 76*

MOLKE, ERIC C.
Oneida Lake, N.Y.—longest prestressed-concrete girder bridge, 330 ft., in U. S. . May 60*

MORRIS, M. D.
Discussion on "The case for professional schools of engineering," R. E. Fadum. Oct. 108

MUNGER, C. G.
Sewer corrosion and protective coatings. May 37*

MURPHY, W. D.
Richmond, Ind.—well points win dewatering battle in sewer tunnel, Gilbert M. Turner, co-author ..... Jul. 48*

NAILLON, J. D.
Discussion of "Leakproof concrete tanks for aviation fuel," John J. Closner, Mark M. Porat, co-authors ..... Jun. 73

NELSON, WALDEMAR S.
Old River Lock on Mississippi—unusual features, A. W. Thompson, co-author .. Apr. 60*

O'BRIEN, MORROUGH P.
The role of research in civil engineering. Jun. 33*

PACKARD, D. B., JR.
Jacksonville, Fla., gets home office building for Atlantic Coast Line RR. ..... Mar. 56*

PARKER, PAUL E.
Webster Street vehicular tube under San Francisco Bay—design and construction Apr. 77*

PATCHELL, W. W.
The rail commuter problem ..... Dec. 56*

PAXSON, GLENN S.
Highway bridge practice ..... Jan. 47*

PAYNE, FREDERICK R., JR.
Southern California Edison Co.—transmission-line construction by helicopter .. May 33*

PELKEY, ORVILLE
Cape Girardeau, Mo.—TV antenna tower, world's tallest structure, Austin C. Woodward, co-author ..... Dec. 33*

PERDUE, L. A.
Des Moines, Iowa—girder holds up a bank Dec. 46*

PHARES, LINDSEY J.
Boston apartment building—wet rotary pre-excavation for piles ..... Feb. 64*

PILTZ, J. S.
How to negotiate for photogrammetric mapping services ..... Jul. 68*

POLAND, GEORGE F.
Fort Lauderdale, Fla.—highway tunnel under New River is anchored in sand .... Mar. 59

PORAT, MARK M.
Ozol, Calif.—jet-fuel depot gets leakproof concrete tanks, John J. Closner, co-author Apr. 44*
Discussion by J. D. Naillon ..... Jun. 73

PRASZKER, MICHAEL
San Francisco's marginal lands developed Feb. 68*

PRESTON, E. S.
Ohio develops specifications for consulting services ..... Nov. 44*

QUINN, A. O.
Why negotiate for photogrammetric services? Nov. 64*

RADZIKOWSKI, H. A.
New equipment on our highways ..... Jan. 50*

RAWLINS, GEORGE S.
Charlotte, N. C., gets water purification plant Apr. 41*

REQUARDT, GUSTAV J.
Percentage fees for engineering services, Frederick R. Knoop, Jr., co-author .. Dec. 48*

RETTIG, ERIK
Brazil—a dam for Brasilia ..... May 54*

REYNOLDS, DON P.
Appointed Assistant Secretary of ASCE. Sep. 55

RICHARDS, DANIEL A.
Korea—tidal basin and lock for a port . Aug. 69*

RICHARDS, R. T.
Japan's new thermal electric stations, O. D. Ides, co-author ..... Feb. 46*

ROBERTS, PALMER W.
Adverse weather—I. Its effect on design and construction (wet hot) ..... Jun. 35*
II. Arctic and subarctic areas (wet cold) Jul. 44*

Discussion on Part I by Douglas S. Laidlaw ..... Aug. 93
Discussion by William Weaver, Jr. . Dec. 74

ROEBLAD, S. G.
Square and cube roots by calculating machine Dec. 72*

RUBIN, AVIV
Horsham, Pa.—prestressed concrete resists fire damage, Charles C. Zollman, Marcello G. Garavaglia, co-authors ..... Dec. 36*

ST. CLAIR, WILLIAM T.
Discussion of "Why not more welded structures?" Van Rensselaer P. Saxe ..... Dec. 74

SANKS, R. L.
Quick, inexpensive, and accurate wire models Apr. 71*

SANYAL, N.
Discussion on "Experience with expansive clay in Peru," Forrest D. Clark ..... Nov. 77

SARJEANT, B. W.
Discussion on "Open-air tube in tank solves many problems," Joseph C. Kent .... Dec. 73

SAVILLE, THORNDIKE, JR.
Discussion of News Brief on Chilean earthquake and tidal waves ..... Sep. 74

SAXE, VAN RENSSELAER P.
Why not more welded structures? ..... Aug. 53*
Discussion by William T. St. Clair . Dec. 74
Discussion by M. C. Magnuson ..... Dec. 74
Author's reply ..... Dec. 74

SCALZI, JOHN B.
Elected ASCE Director, District 9 ..... Oct. 85

SCHAEFFER, HANS R.
Computing prestressed concrete composite sections ..... Jun. 72*
Discussion by Kenneth Diao ..... Aug. 92

SCHREIBER, HUGH A.
Washington, D.C.—sewage treatment plant—experimental installations to increase digester capacity ..... Feb. 35*

SCHROTER, G. AUSTIN
California housing developments in hillside environments, Ray O. Maurseth co-author Jun. 66*

SCHWARTZ, IRVIN
Joins staff of ASCE Technical Publications Jan. 81

SCOBEY, FRED C.
Elected Honorary Member of ASCE .... Oct. 87

SHAPIRO, DANIEL
Squaw Valley, Calif.—ski jumps ..... Jan. 76*

SIMPSON, W. E.
San Antonio, Tex.—Villita Assembly Building has cable-suspended roof ..... Nov. 63*

SMALL, DOUGLAS E.
Interstate Highway Route between Chicago and Milwaukee—success with a novel paving plant ..... Jan. 54*

SMITH, WILBUR S.
Traffic and transportation in urban renewal Oct. 45*

SPANGLER, M. G.
Discussion on corrections to ASCE Manual on sewer design ..... Oct. 108

SPIRO, R. P.
Discussion giving correction for "Surveying instruments in mils," John J. Durkin . Aug. 93

STEINER, FRANK D.
New composite-beam concepts ..... Feb. 72*

STEINMAN, D. B.
Hammerhead piers carry Richmond-Petersburg, Va., turnpike bridge, C. H. Gronquist co-author (1959, Nov., p. 774)*
Correction by Mr. Gronquist ..... Jan. 79
ASCE Fellow, dies ..... Sep. 75
Correction in obituary ..... Nov. 81

STONE, RALPH
California community uses waste stabilization basins for a desert sewage treatment plant Mar. 42*

STOUT, NORMAN N.
Vandenberg Air Force Base construction for missile launching ..... Feb. 54*

STRIKE, CLIFFORD S.
Hartford, Conn.—a constructor gets into urban renewal ..... Oct. 50*

SUNBURY, R. D.
California Division of Highways uses high-strength steels for bridges, Leonard C. Hollister, co-author ..... Jun. 60*

SWAIN, R. J.
San Francisco, Calif.—bottom of San Francisco Bay evaluated for Trans-Bay Tube Nov. 66*

SWAIN, ROBERT O.
Highway progress around the world ... Jan. 70*

SWANSON, VERNON E.
Extra-large bars for reinforced concrete columns ..... Feb. 82*

TABOR, GUY F., JR.
Concrete mixes designed by nomograph..Mar. 73*
Discussion by N. E. Henning ..... May 75

TALLAMY, B. D.
Charting the highway program through 1960 Jan. 33*

TATUM, WILLIAM O., III
Pakistan and Iran—international civil airports under construction by Corps of Engineers, Lewis W. McBride, co-author .. Sep. 45*

TAYLOR, DELMAR J.
VeriKlag scale for stream-flow routing.Oct. 80*

TERZAGHI, KARL
Karl Terzaghi Award established by ASCE Sep. 84
Honored by dedication to him of book *From Theory to Practice in Soil Mechanics*, which includes his most important writings . Dec. 75

THOMAS, FRANKLIN
Caltech Engineering Lab named in memory of Dec. 77

THOMPSON, A. W.
Old River Lock on Mississippi—unusual features, Waldemar S. Nelson, co-author.Apr. 60*

TILLMAN, H. E.
Coal tar as a steel-pipe coating ..... Nov. 72*

TRAUTWINE, JOHN C.
Discussion of his book, *The Civil Engineer's Pocket-Book*, by James W. Darling .. Dec. 75

TUDOR, RALPH A.
Power partnership and politics ..... Sep. 33*

TURNER, GILBERT M.
Richmond, Ind.—well points win dewatering battle in sewer tunnel, W. D. Murphy, co-author ..... Jul. 48*

VOORDUIN, W. L.
Iran—Dez Dam..... Aug. 50*

WATSON, JOHN D.
Elected ASCE Director, District 10 .. Oct. 85

WEAVER, FRANK L.
Power development in the United States.Sep. 70*

WEAVER, WILLIAM, JR.
Discussion of Douglas S. Laidlaw's letter on rising of roof-slab corners ..... Dec. 74

WEIDMAN, J. H.
Norfolk, Va., builds for the future, Donald R. Locke, co-author ..... Oct. 68*

WHITE, ROSS
Old River Lock on Mississippi—construction planning ..... Apr. 64*

WHITMORE, GEORGE D.
Lift-slab construction for U.S.G.S. building Jul. 67*

WILLEY, C. K.
Columbia River—Wanapum Hydroelectric Development ..... Sep. 65*

WILLIAMS, GEORGE T.
Discussion on use of shear connectors in composite sections ..... Oct. 108

WILLIAMS, IRA E.
Oklahoma-Texas route across Lake Texoma—exceptional job engineering pays off on bridge construction ..... Jan. 60*

WISELY, WILLIAM H.
Policy statement for ASCE Board of Direction on consultants and government work Feb. 37

WOODWARD, AUSTIN C.
Cape Girardeau, Mo.—TV antenna tower, world's tallest structure, Orville Pelkey, co-author ..... Dec. 33*

WOOLF, ABRAHAM
Discussion of "M-m Tables for deflection calculations," H. H. Fickel ..... Aug. 93

WRIGHT, JOHN E.
The civil engineer's civic responsibility . Sep. 48*

ZECCA, JOHN A.
Resigns as comptroller of ASCE ..... Nov. 78

ZIMMERMANN, RICHARD Z., JR.
Discussion commending Final Report of Los Angeles Section's Committee on Engineering Education (1959, Oct., p. 734) ..... Jan. 78

ZOLLMAN, CHARLES C.
Horsham, Pa.—prestressed concrete resists fire damage, Marcello G. Garavaglia, Aviv Rubin, co-authors ..... Dec. 36*

ZUMWALT, T. H.
Gulf of Mexico—a power plant at sea for sulphur mining, H. R. Davies, Jr., co-author ..... Jun. 50*

Civil Engineering Departments

Advertising
Am-Soc Briefs
ASCE Conventions*
ASCE News*
By-line Washington
Catalog Digests
Deceased
Division Doings
Do You Know That
Equipment, Materials and Methods
Engineering Salary Index
Engineering Societies Personnel Service, Inc.
Engineers' Notebook*
Exam Gems
Films Available
From the Manufacturers
Index to Advertisers
Literature Available
New in Education
New Publications
News Briefs*
News of Members
Non-ASCE Meetings
Notes from the Local Sections
Positions Announced
Proceedings Papers Available as Separates
Scheduled ASCE Meetings
The Readers Write*
Recent Books
The Younger Viewpoint

*Indexed